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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
| 10/029,841 | 12/31/2001 | Masao Gunji | 108287-00005 | 5346 |
| 7590 04/20/2005 | | | EXAMINER | |
| ARENT FOX KINTNER PLOTKIN & KAHN, PLLC | | | LE, NHAN T | |
| Suite 600 | | | ART UNIT | |
| 1050 Connecticut Avenue, N.W. | | | PAPER NUMBER | |
| Washington, DC 20036-5339 | | | 2685 | |

DATE MAILED: 04/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|-------------------------------|------------------------------|--|
| Office Action Summary | Application No. 10/029,841 | Applicant(s) GUNJI ET AL. | |
| | Examiner Nhan T Le | Art Unit 2685 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>12/31/2001</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of Claims 1-11 in the reply filed on 10/08/2004 is acknowledged.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kashiwagi et al (US 2002/0098870) in view of Applicant's admitted prior art.

As to claims 1, 3, 4, Kashiwagi teaches a multi-channel management apparatus that is applied to a multi-channel input system for making cordless connection between a terminal and a input apparatus corresponding to the terminal based on a multi-channel system, the multi-channel management apparatus comprising: a management unit (see fig. 3, number 133, page 3, paragraphs 0036-0037) which manages a setting status of each channel in the multi-channel input system; and a notification unit (see page 3, paragraphs 0043, 0046) which notifies the setting status to a particular terminal according to a request from the particular terminal. Kashiwagi fails to teach the input system for making cordless connection between plurality of the terminals and plurality of input apparatuses. Application's admitted prior art teaches the input system for making cordless connection between plurality of the terminals and plurality of input apparatuses

(see background section page 1, line 18 – page 6, line 22). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Applicant's admitted prior art into the system of Kashiwagi in order to allow users setting the channels to the appropriated terminals (as suggested by Applicant's admitted prior art, page 6, lines 6-22).

As to claim 2, Kashiwagi teaches an interference channel candidate extraction unit which selects a channel as a candidate interference channel having a possibility of the occurrence of interference at the time of updating a set channel, and notifies the interference channel to a terminal, when this channel other than the set channel has a data reception during a period while the set channel set at the terminal has no data reception (see page 4, paragraph 0048-0051).

As to claims 5, 10, 11, Kashiwagi teaches a multi-channel terminal by utilizing a set channel that has been set in advance out of a plurality of channels based on a multi-channel system, the multi-channel terminal comprising: a checking unit (see page 3, paragraph 0041) which checks presence or absence of a data reception in a channel other than a set channel during a period while the set channel has no data reception; and an interference channel candidate extraction unit (see see page 4, paragraph 0048-0051) which selects a channel as a candidate interference channel having a possibility of the occurrence of interference at the time of updating the set channel, when the checking unit has detected a data reception. Kashiwagi fails to teach the multi-channel terminal that is in cordless connection to an input apparatus. Applicant's admitted prior art teaches the multi-channel terminal that is in cordless connection to an input

apparatus (see background section page 1, line 18 – page 6, line 22). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Applicant's admitted prior art into the system of Kashiwagi in order to allow users setting the channels to the appropriated terminals (as suggested by Applicant's admitted prior art, page 6, lines 6-22).

As to claims 6, 7, Kashiwagi teaches a notification unit which notifies the candidate interference channel to a user and notifies a setting status of each channel of the multi-channel system, in addition to the interference channel. (see page 3, paragraphs 0043, 0046).

As to claim 8, Kashiwagi teaches an interruption processing unit which interrupts a processing to execute a processing of received data, when a set channel has received data while the checking unit is checking (see page 3, paragraph 0042).

As to claim 9, Kashiwagi teaches wherein the checking unit destroys data that has been received during the checking (see page 3, paragraph 0042).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Herrig (US 6,539,203) teaches method for determining cellular radio channels assignments to minize interference due to intermodulation products.

Shigyo (US 6,597,292) teaches wireless transmission apparatus and control system.

Pasanen (US 6,587,450) teaches local area network.

Ollivier et al (US 6,738,881) teaches mutli-channel DMC with schedule ports.

Himmel et al (US 2003/0033452) teaches wireless system bus.

Curley et al (US 2002/0102979) teaches computer system including multi-channel wireless communication link to a remote station.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nhan T Le whose telephone number is 571-272-7892. The examiner can normally be reached on 08:00-05:00 (Mon-Fri).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on 571-272-7899. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nhan Le

Nguyen Vo
4-17-2005

NGUYENT.VO
PRIMARY EXAMINER